

IN THE CLAIMS:

Please amend the claims as indicated in the complete listing of pending claims listed below.

1. (withdrawn) A method to blend two images, the method comprising:
loading a vector of keys into a vector register;
converting the vector of keys into a first vector of blending factors for a first image
and a second vector of blending factors for a second image using a plurality of
look up tables in a vector look up unit; and
computing an image attribute for a blended image using the blending factors.
2. (withdrawn) A method as in claim 1 wherein the blending factors are one of:
a) floating point numbers;
b) fixed point numbers; and
c) integers.
3. (withdrawn) A method as in claim 1 wherein said converting comprises:
generating a first vector of indices in a vector register by replicating a first subset of
the vector of keys as a first subset of the first vector of indices for looking up
first blending factors for the first image and replicating the first subset of the
vector of keys as a second subset of the first vector of indices for looking up
second blending factors for the second image; and
looking up simultaneously the first and second blending factors using the first vector
of indices in the vector look up unit.

4. (withdrawn) A method as in claim 3 further comprising:
storing the first blending factors into the first vector of blending factors and the
second blending factors into the second vector of blending factors.
5. (withdrawn) A method as in claim 1 wherein said converting comprises:
generating a first vector of indices in a vector register, one key in the vector of keys
being replicated as a first plurality of indices in the first vector of indices for
looking up respectively a plurality of bit segments of a first blending factor;
and
looking up simultaneously a first vector of blending factors comprising the first
blending factor using the first vector of indices in the vector look up unit.
6. (withdrawn) A method to blend two images, the method comprising:
loading a first vector of keys into a vector register;
loading a second vector of keys into a vector register;
converting the first vector of keys into a first vector of blending factors for a first
image and the second vector of keys into a second vector of blending factors
for a second image using a plurality of look up tables in a vector look up unit;
and
computing an image attribute for a blended image using the blending factors.
7. (withdrawn) A method as in claim 6 wherein the blending factors are one of:
 - a) floating point numbers;
 - b) fixed point numbers; and

c) integers.

8. (withdrawn) A method as in claim 6 wherein said converting comprises:
generating a first vector of indices in a vector register by replicating a first subset of
the first vector of keys as a first subset of the first vector of indices for looking
up first blending factors for the first image and replicating a first subset of the
second vector of keys as a second subset of the first vector of indices for
looking up second blending factors for the second image; and
looking up simultaneously the first and second blending factors using the first vector
of indices in the vector look up unit.
9. (withdrawn) A method as in claim 8 further comprising:
storing the first blending factors into the first vector of blending factors and the
second blending factors into the second vector of blending factors.
10. (withdrawn) A method as in claim 6 wherein said converting comprises:
generating a first vector of indices in a vector register, one key in the first vector of
keys being replicated as a first plurality of indices in the first vector of indices
for looking up respectively a plurality of bit segments of a first blending
factor; and
looking up simultaneously a first vector of blending factors comprising the first
blending factor using the first vector of indices in the vector look up unit.

11. (withdrawn) A machine readable media containing executable computer program instructions which when executed by a digital processing system cause said system to perform a method to blend two images, the method comprising:
loading a vector of keys into a vector register;
converting the vector of keys into a first vector of blending factors for a first image
and a second vector of blending factors for a second image using a plurality of
look up tables in a vector look up unit; and
computing an image attribute for a blended image using the blending factors.
12. (withdrawn) A media as in claim 11 wherein the blending factors are one of:
 - a) floating point numbers;
 - b) fixed point numbers; and
 - c) integers.
13. (withdrawn) A media as in claim 11 wherein said converting comprises:
generating a first vector of indices in a vector register by replicating a first subset of
the vector of keys as a first subset of the first vector of indices for looking up
first blending factors for the first image and replicating the first subset of the
vector of keys as a second subset of the first vector of indices for looking up
second blending factors for the second image; and
looking up simultaneously the first and second blending factors using the first vector
of indices in the vector look up unit.
14. (withdrawn) A media as in claim 13 wherein the method further comprises:

storing the first blending factors into the first vector of blending factors and the second blending factors into the second vector of blending factors.

15. (withdrawn) A media as in claim 11 wherein said converting comprises:
generating a first vector of indices in a vector register, one key in the vector of keys being replicated as a first plurality of indices in the first vector of indices for looking up respectively a plurality of bit segments of a first blending factor;
and
looking up simultaneously a first vector of blending factors comprising the first blending factor using the first vector of indices in the vector look up unit.
16. (withdrawn) A machine readable media containing executable computer program instructions which when executed by a digital processing system cause said system to perform a method to blend two images, the method comprising:
loading a first vector of keys into a vector register;
loading a second vector of keys into a vector register;
converting the first vector of keys into a first vector of blending factors for a first image and the second vector of keys into a second vector of blending factors for a second image using a plurality of look up tables in a vector look up unit;
and
computing an image attribute for a blended image using the blending factors.
17. (withdrawn) A media as in claim 16 wherein the blending factors are one of:
 - a) floating point numbers;
 - b) fixed point numbers; and

c) integers.

18. (withdrawn) A media as in claim 16 wherein said converting comprises:
generating a first vector of indices in a vector register by replicating a first subset of
the first vector of keys as a first subset of the first vector of indices for looking
up first blending factors for the first image and replicating a first subset of the
second vector of keys as a second subset of the first vector of indices for
looking up second blending factors for the second image; and
looking up simultaneously the first and second blending factors using the first vector
of indices in the vector look up unit.
19. (withdrawn) A media as in claim 18 wherein the method further comprises:
storing the first blending factors into the first vector of blending factors and the
second blending factors into the second vector of blending factors.
20. (withdrawn) A media as in claim 16 wherein said converting comprises:
generating a first vector of indices in a vector register, one key in the first vector of
keys being replicated as a first plurality of indices in the first vector of indices
for looking up respectively a plurality of bit segments of a first blending
factor; and
looking up simultaneously a first vector of blending factors comprising the first
blending factor using the first vector of indices in the vector look up unit.
21. (withdrawn) A processing system to blend two images, the system comprising:
means for loading a vector of keys into a vector register;

means for converting the vector of keys into a first vector of blending factors for a first image and a second vector of blending factors for a second image using a plurality of look up tables in a vector look up unit; and
means for computing an image attribute for a blended image using the blending factors.

22. (withdrawn) A processing system as in claim 21 wherein the blending factors are one of:

- a) floating point numbers;
- b) fixed point numbers; and
- c) integers.

23. (withdrawn) A processing system as in claim 21 wherein said means for converting comprises:

means for generating a first vector of indices in a vector register by replicating a first subset of the vector of keys as a first subset of the first vector of indices for looking up first blending factors for the first image and replicating the first subset of the vector of keys as a second subset of the first vector of indices for looking up second blending factors for the second image; and
means for looking up simultaneously the first and second blending factors using the first vector of indices in the vector look up unit.

24. (withdrawn) A processing system as in claim 23 further comprising:

means for storing the first blending factors into the first vector of blending factors and the second blending factors into the second vector of blending factors.

25. (withdrawn) A processing system as in claim 21 wherein said means for converting comprises:
- means for generating a first vector of indices in a vector register, one key in the vector of keys being replicated as a first plurality of indices in the first vector of indices for looking up respectively a plurality of bit segments of a first blending factor; and
- means for looking up simultaneously a first vector of blending factors comprising the first blending factor using the first vector of indices in the vector look up unit.
26. (withdrawn) A processing system to blend two images, the system comprising:
- means for loading a first vector of keys into a vector register;
- means for loading a second vector of keys into a vector register;
- means for converting the first vector of keys into a first vector of blending factors for a first image and the second vector of keys into a second vector of blending factors for a second image using a plurality of look up tables in a vector look up unit; and
- means for computing an image attribute for a blended image using the blending factors.
27. (withdrawn) A processing system as in claim 26 wherein the blending factors are one of:
- a) floating point numbers;
 - b) fixed point numbers; and
 - c) integers.

28. (withdrawn) A processing system as in claim 26 wherein said means for converting comprises:
means for generating a first vector of indices in a vector register by replicating a first subset of the first vector of keys as a first subset of the first vector of indices for looking up first blending factors for the first image and replicating a first subset of the second vector of keys as a second subset of the first vector of indices for looking up second blending factors for the second image; and
means for looking up simultaneously the first and second blending factors using the first vector of indices in the vector look up unit.
29. (withdrawn) A processing system as in claim 28 further comprising:
means for storing the first blending factors into the first vector of blending factors and the second blending factors into the second vector of blending factors.
30. (withdrawn) A processing system as in claim 26 wherein said means for converting comprises:
means for generating a first vector of indices in a vector register, one key in the first vector of keys being replicated as a first plurality of indices in the first vector of indices for looking up respectively a plurality of bit segments of a first blending factor; and
means for looking up simultaneously a first vector of blending factors comprising the first blending factor using the first vector of indices in the vector look up unit.
31. (original) A processing system to blend two images, the system comprising:

a vector register file comprising a plurality of vector registers;
a vector processing unit coupled to the vector register file, the vector processing unit comprising a vector look up unit adapted to look up a vector of data items simultaneously, the vector processing unit:
loading a vector of keys into a vector register in the vector register file;
converting the vector of keys into a first vector of blending factors for a first image and a second vector of blending factors for a second image using a plurality of look up tables in the vector look up unit; and
computing an image attribute for a blended image using the blending factors.

32. (original) A processing system as in claim 31 wherein the blending factors are one of:
a) floating point numbers;
b) fixed point numbers; and
c) integers.

33. (original) A processing system as in claim 31 wherein to convert the vector of keys the vector processing unit:
generates a first vector of indices in a vector register in the vector register file by replicating a first subset of the vector of keys as a first subset of the first vector of indices for looking up first blending factors for the first image and replicating the first subset of the vector of keys as a second subset of the first vector of indices for looking up second blending factors for the second image;
and
looks up simultaneously the first and second blending factors using the first vector of indices in the vector look up unit.

34. (original) A processing system as in claim 33 wherein the vector processing unit stores the first blending factors into the first vector of blending factors in a first vector register in the vector register file and the second blending factors into the second vector of blending factors in a second vector register in the vector register file.
35. (original) A processing system as in claim 31 wherein to convert the vector of keys the vector processing unit:
generates a first vector of indices in a vector register in the vector register file, one key in the vector of keys being replicated as a first plurality of indices in the first vector of indices for looking up respectively a plurality of bit segments of a first blending factor; and
looks up simultaneously a first vector of blending factors comprising the first blending factor using the first vector of indices in the vector look up unit.
36. (original) A processing system to blend two images, the system comprising:
a vector register file comprising a plurality of vector registers;
a vector processing unit coupled to the vector register file, the vector processing unit comprising a vector look up unit adapted to look up a vector of data items simultaneously, the vector processing unit:
loading a first vector of keys into a vector register in the vector register file;
loading a second vector of keys into a vector register in the vector register file;
converting the first vector of keys into a first vector of blending factors for a first image and the second vector of keys into a second vector of

blending factors for a second image using a plurality of look up tables
in the vector look up unit; and
computing an image attribute for a blended image using the blending factors.

37. (original) A processing system as in claim 36 wherein the blending factors are one of:
- a) floating point numbers;
 - b) fixed point numbers; and
 - c) integers.
38. (original) A processing system as in claim 36 to convert the vector of keys the vector processing unit:
generates a first vector of indices in a vector register by replicating a first subset of
the first vector of keys as a first subset of the first vector of indices for looking
up first blending factors for the first image and replicating a first subset of the
second vector of keys as a second subset of the first vector of indices for
looking up second blending factors for the second image; and
looks up simultaneously the first and second blending factors using the first vector of
indices in the vector look up unit.
39. (currently amended) A processing system as in claim 38 wherein the vector
processing unit stores the first blending factors into the first vector of blending factors
in a first vector register in the vector ~~register~~ register file and the second blending
factors into the second vector of blending factors in a second vector register in the
vector register file.

40. (original) A processing system as in claim 36 wherein to convert the vector of keys
the vector processing unit:

generates a first vector of indices in a vector register in the vector register file, one
key in the first vector of keys being replicated as a first plurality of indices in
the first vector of indices for looking up respectively a plurality of bit
segments of a first blending factor; and
looks up simultaneously a first vector of blending factors comprising the first
blending factor using the first vector of indices in the vector look up unit.